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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,793	03/12/2007	Markus Kley	WW053USU	8546

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STAMFORD, CT 06901

EXAMINER

TRIEU, THAI BA

ART UNIT	PAPER NUMBER
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3748

MAIL DATE	DELIVERY MODE
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12/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,793	Applicant(s) KLEY, MARKUS	
	Examiner Thai-Ba Trieu	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/21/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The preliminary Amendment file don June 21, 2006 is acknowledged.

Claims 1-10 were cancelled; and

Claims 11-21 were newly added.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the citizenship of each inventor properly. The citizenship of each inventor in this application should be -- **Germany** --, instead of "**German**" therein.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "***the outlet openings***" (See Page 7, line 10) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention

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should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.


2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character **“4.1”** has been used to designate both **“the end 4.1 of the drive shaft 4”** (See Page 6, lines 18-19) and **“the front side 4.1 of the drive shaft 4”** (See Page 7, line 14). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures

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appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "**20**" has been used to designate both "**crankshaft 20**" (See Page 8, line 19) and "**engine 20**" (See Page 8, line 19). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The arrow in the Fig. 1 should be shown as indicated below, since the channel 10 for working medium in flow conducting manner with the evacuation channel (6) for discharging the working medium out of the toroidal working chamber.

The arrow should be changed in
the direction as 

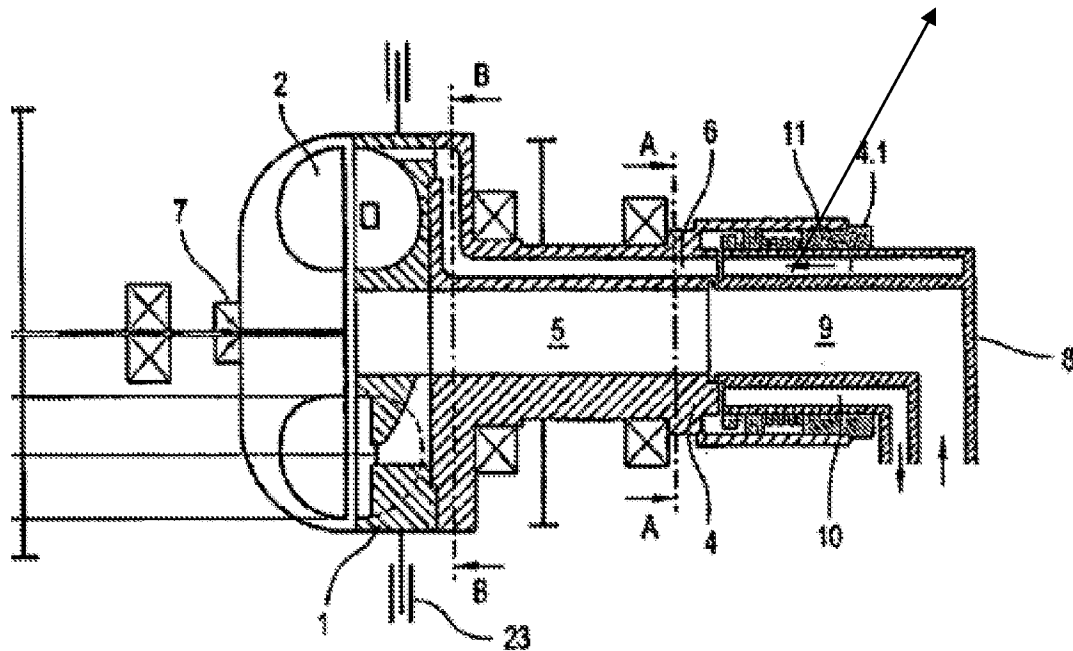


Fig.1

Specification

a. IN THE SPECIFICATION:

1. The disclosure is objected to because of the following informalities: the following headings in the specification are missing:

Background of the Invention;

Summary of the Invention;

Brief description of the Drawings; and

Detailed Description of the Preferred Embodiments

Applicant is requested to insert heading to separate the various parts application.

Appropriate correction is required.

2. Applicant discloses “the object according to the invention is solved by a hydraulic coupling with features **of claim 1. Claim 8** describes a corresponding drive train according to the invention. The **sub-claims** describe particularly advantageous enhancements of the invention” (Page 2, lines 19-22); however, claim(s) may be amended or cancelled during the prosecution of the instant application, and therefore, is not an appropriate characterization of the invention.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The recitation of “first end being located a predetermined distance from the toroidal working chamber” has no support in the specification.

B. IN THE ABSTRACT:

Applicant is required to submit a substitute abstract to meet the requirement set forth below:

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to **a single paragraph on a separate sheet** within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

Claim 18 is objected to because of the following informalities:

Line 3, "**an**" before "**an inner**" should be deleted (*for addressing redundancy*).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 and its dependent claims 12-19; and claim 20 and its dependent claim 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically,

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- In claim 11, lines 6 and 10; and claim 20, lines 11 and 14, the recitation of “pre-specified segment” renders the claim indefinite, since it is not clear that how this segment is to be pre-specified? Applicant is required to identify the pre-specific way for this segment or to revise the claimed limitation.

- In claim 11, lines 15-16; and claim 21, lines 19-20, the recitation of “said first end being located a predetermined distance from said toroidal chamber” renders the claim indefinite, since it is not clear that how long the distance is predetermined (i.e. 1 inch, 1 cm, 1 foot etc...) , why this distance needs to be predetermined or for which purpose the first end has to be positioned at a predetermined distance? Applicant is required to clarify the length of the distance needing to be predetermined and identify the measurement of the length of the predetermined distance, or to revise the claimed language.

- In claims 16 and 21, line 2, “can be mechanically locked” renders the claim indefinite, since it is not clear that under which condition the primary impeller can be mechanically locked; and under which condition the primary impeller cannot be mechanically locked. Applicant is required to identify these conditions or to revise the claimed features.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-12 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maybach-Motorenbau (Patent Number FR 860,103).

Maybach-Motorenbau a hydrodynamic coupling comprising:

a primary impeller (Not Numbered);

a secondary impeller (Not Numbered), said primary and secondary impellers (Not Numbered) forming a toroidal working chamber (See Figure 1);

a drive shaft (7) driving said primary impeller (Not Numbered), said drive shaft (7) having a first end (Not Numbered), a second end (Not Numbered), a central axis (Not Numbered), and a prespecified segment between said first and second ends (Not Numbered) (See Figure 1);

at least one supply channel (via 31 and 8) for introducing a working medium to said toroidal working chamber, said at least one supply channel (via 31 and 8) being formed in said drive shaft (7) at said central axis along said prespecified segment (Not Numbered); and

an evacuation channel (via 9 and 32) for evacuating said working medium from said toroidal working chamber, said evacuation channel being formed in said drive shaft (7) radially about said at least one supply channel, said

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evacuation channel (via 9, 32) being formed from said first end up to at least said second end, said first end being located a predetermined distance from said toroidal working chamber (See Figure 1, and Pages 1-3);

wherein said primary impeller (Not Numbered) is on said drive shaft or is formed as a part of said drive shaft (See Figure 1);

wherein said primary and secondary impellers (Not Numbered) are mounted on said drive shaft (7) in a floating manner (See Figure 1);

wherein said primary impeller (Not Numbered) can be mechanically locked against rotation so that the hydrodynamic coupling exercises the function of a retarder when said secondary impeller is driven (See Figure 1).

However, Maybach-Motorenbau fails to disclose a plurality of evacuation channels.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a plurality of evacuation channels, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8 (CA 7 1977).

Note that:

The recitation of “so that the hydrodynamic coupling exercises the function of a retarder when said secondary impeller is driven” is considered as the functional language. The modified Maybach-Motorenbau discloses all the

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structural components of an engine system, which are read on those of the instant invention. Therefore, the Maybach-Motorenbau system is capable of performing the same desired functions as the instant invention having been claimed in claim 16.

Claims 11-12 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maybach-Motorenbau (Patent Number FR 860,103), in view of Adolf Auer (Patent Number DE 961,058).

Maybach-Motorenbau a hydrodynamic coupling comprising:

- a primary impeller (Not Numbered);

- a secondary impeller (Not Numbered), said primary and secondary impellers (Not Numbered) forming a toroidal working chamber (See Figure 1);

- a drive shaft (7) driving said primary impeller (Not Numbered), said drive shaft (7) having a first end (Not Numbered), a second end (Not Numbered), a central axis (Not Numbered), and a prespecified segment between said first and second ends (Not Numbered) (See Figure 1);

- at least one supply channel (via 31 and 8) for introducing a working medium to said toroidal working chamber, said at least one supply channel (via 31 and 8) being formed in said drive shaft (7) at said central axis along said prespecified segment (Not Numbered); and

- an evacuation channel (via 9 and 32) for evacuating said working medium from said toroidal working chamber, said evacuation channel being formed in

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said drive shaft (7), said evacuation channel (via 9, 32) being formed from said first end up to at least said second end, said first end being located a predetermined distance from said toroidal working chamber (See Figure 1, and Pages 1-3);

wherein said primary impeller (Not Numbered) is on said drive shaft or is formed as a part of said drive shaft (See Figure 1);

wherein said primary and secondary impellers (Not Numbered) are mounted on said drive shaft (7) in a floating manner (See Figure 1);

wherein said primary impeller (Not Numbered) can be mechanically locked against rotation so that the hydrodynamic coupling exercises the function of a retarder when said secondary impeller is driven (See Figure 1).

However, Maybach-Motorenbau fails to disclose a plurality of evacuation channels.

Adolf Auer teaches that it is conventional in the art of the hydraulic coupling; to utilize a plurality of evacuation channels being formed radially about said at least one supply channel.

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a plurality of evacuation channels (Not Numbered) being formed radially about said at least one supply channel (38) (See Figure 1), as taught by Adolf Auer, to improve the efficiency for the Maybach-Motorenbau device, since the use thereof the working medium would have been completely evacuated from the working chamber.

Note that:

The recitation of “so that the hydrodynamic coupling exercises the function of a retarder when said secondary impeller is driven” is considered as the functional language. The modified Maybach-Motorenbau discloses all the structural components of an engine system, which are read on those of the instant invention. Therefore, the Maybach-Motorenbau system is capable of performing the same desired functions as the instant invention having been claimed in claim 16.

Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maybach-Motorenbau (Patent Number FR 860,103), in view of Adolf Auer (Patent Number DE 961,058), and further in view of Design choice.

The modified Maybach-Motorenbau device discloses the invention as recited above, and further discloses each of said plurality of evacuation channels and said at least one supply channel comprising an inlet opening (Not Numbered) (See Figure 1 of Maybach-Motorenbau); wherein said at least one supply channel (via 31) opens into said toroidal working chamber in a region of an intermediate circumference of said toroidal working chamber, said region of an intermediate circumference being between a region of an inner circumference and said region of an outer circumference of said toroidal working chamber (See Figure 1 of Adolf Auer).

However, the modified Maybach-Motorenbau device fails to disclose the location/region wherein the openings of the evacuation channels and the supply channel.

It would have been obvious to one having ordinary skill in the art at that time the invention was made to have positioned said evacuation channel open into said toroidal working chamber in a region of an outer circumference of said toroidal working chamber, since the location of said evacuation channel open into said toroidal working chamber would have performed equally well in that location and the mere repositioning of parts not effecting the functioning of the device involves only routine skill in the art, *In re Japikse*, 86 USPQ 70.

Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oguchi et al. (Patent Number 5,138,840), in view of Maybach-Motorenbau (Patent Number FR 860,103), and further in view of Adolf Auer (Patent Number DE 961,058).

Oguchi discloses a drive train (4,6,11) comprising:

an internal combustion engine (2) driving a crankshaft (12);

an exhaust gas turbine (3) disposed in a flow of exhaust from said internal combustion engine (2), said exhaust gas turbine (3) being connected with said crankshaft (12) (via 11, 6, 4); and

a hydrodynamic coupling (6) disposed between said exhaust gas turbine (3) and said crankshaft (12) (See Figure 1).

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However, Oguchi fails to disclose the structural details of said hydrodynamic coupling.

Maybach-Motorenbau teaches that it is conventional in the art of hydraulic coupling, to utilize a primary impeller (Not Numbered) and a secondary impeller (Not Numbered) forming a toroidal working chamber(Not Numbered);

a drive shaft (7) driving said primary impeller (Not Numbered), said drive shaft (7) having a first end (Not Numbered), a second end (Not Numbered), a central axis (Not Numbered), and a prespecified segment between said first and second ends (Not Numbered);

at least one supply channel (via 31 and 8) for introducing a working medium to said toroidal working chamber (Not Numbered), said at least one supply channel (via 31 and 8) being formed in said drive shaft (7) at said central axis along said prespecified segment (Not Numbered); and

an evacuation channel (via 9 and 32) for evacuating said working medium from said toroidal working chamber, said evacuation channel being formed in said drive shaft (7), said evacuation channel (via 9, 32) being formed from said first end up to at least said second end, said first end being located a predetermined distance from said toroidal working chamber (See Figure 1, and Pages 1-3);

wherein said primary impeller (Not Numbered) can be mechanically locked against rotation so that said hydrodynamic coupling brakes said crankshaft hydrodynamically.

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Additionally, Adolf Auer teaches that it is conventional in the art of the hydraulic coupling; to utilize a plurality of evacuation channels being formed radially about said at least one supply channel.

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized the structural details of said hydrodynamic coupling, as taught by Maybach-Motorenbau and Adolf Auer, to improve the efficiency for the Oguchi device, since the use thereof the working medium would have been completely evacuated from the working chamber.

Note that:

The recitation of “so that the hydrodynamic coupling braking the crankshaft hydraulically” is considered as the functional language. The modified Maybach-Motorenbau discloses all the structural components of an engine system, which are read on those of the instant invention. Therefore, the Maybach-Motorenbau system is capable of performing the same desired functions as the instant invention having been claimed in claim 21.

Allowable Subject Matter

Claims 17-19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The IDS (PTO-1449) filed on June 21, 2006 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TTB
October 20, 2008

/Thai-Ba Trieu/
Primary Examiner
Art Unit 3748